

## ABSTRACT

A mechanism for processing graphical block diagram parameter expressions is presented. The mechanism achieves optimal implementation of block equations in the execution (run-time) environment by defining a mapping between user-defined block parameters and a run-time version of the parameters. The parameter processing mechanism also pools like, non-interfaced parameter expressions, allowing reuse of both uniform and non-uniform data across constant block parameters in the generated code and during model execution. The parameter processing mechanism further maintains an execution structure that maps the run-time parameter expressions containing interfaced variables to generated code for the block diagram so that the interfaced variables appear in the generated code. This mapping thus allows for interfacing to the interfaced variables in the generated code from any execution framework.

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